

MCGWG-M-51

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COMIREX MAPPING, CHARTING AND GEODESY WORKING GROUP

Minutes of Meeting Held in Room 1D918  
Pentagon  
10:30-12:30 Hours, 31 March 1970

PRESIDING

[REDACTED]

25X1A

MEMBERS PRESENT

[REDACTED]

25X1A

CONSULTANTS PRESENT

[REDACTED]

25X1A

1. Purpose of Meeting: [REDACTED] indicated that the sole purpose of this special meeting was to consider action to be taken with regard to operating the Doppler Beacon on the KH-4 system. He explained the discussion at COMIREX on 19 March at which time he mentioned certain problems which were occurring with respect to coordinating the operation of the Doppler Beacon with the receiving stations. This led to discussion which brought out that the Doppler Beacon on Mission 1109 was operating to a limited degree over portions of the Sino Soviet Area. Because this was not completely understood in connection with this mission, a decision was made to not operate the beacon for the last part of the mission.

[REDACTED] mentioned that he would like to have the initial results of the mission described and then the working group should work toward preparing a paper which could be presented to the Chairman, COMIREX, to reopen the question of operating the Doppler Beacon. He mentioned that we should try to have a paper for the 2 April 1970 COMIREX meeting. Further,

and Recommendation

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a meeting was scheduled on the West Coast to consider planning for further missions and it would be important to have the question of operation of the Doppler Beacon resolved prior to that time.

2. Operation of the Doppler Beacon on the KH-4 System.

25X1A a. [REDACTED] to describe what had taken place with respect to Mission 1109. [REDACTED] showed the various locations 25X1A for the Doppler receivers indicating that the beacon and the receivers had worked fine during the mission. There had been some oscillator drift during the 1st 12 hours but the data showed that it had stabilized by about 12 hours into the mission. Sometime after recovery of the first bucket some data loss had been experienced. An evaluation indicated that the loss was not as severe as originally thought. Because of changes in the actual orbit from the planned orbit, times over the stations changed. Some stations lost data because they were not advised of the changes. Several low elevation passes were lost because of earth rotation during the time difference. In some instances the satellite could have been received at other stations but the program was not cut for such adjustments. Because of the decision to turn the beacon off over the bloc, we are unable 25X1A to compute an ephemeris for the last two days of the mission. Fortunately almost all of the DISIC film had been used up before the decision to withhold operation of the beacon over the Sino Soviet Area. [REDACTED] explained that the data reduction work done by Navy at DAHLGREN was based on an arc length of approximately three revolutions. Differences of only 30 meters were being obtained where the segments overlapped from one arc to the next. It was explained that an accurate ephemeris could not be obtained where the receivers peripheral to the Sino Soviet are not operated. If these receivers are not operated we could expect errors greater than 200 meters in the ephemeris for a sizable area of the Sino Soviet Bloc. 25X1A [REDACTED] mentioned that he had sent out the message toward the end of the mission by direction of the Chief of the SOC asking that the beacon be turned off over the Sino Soviet Area. It was clarified that the point at which the beacon would be turned off under these circumstances was vertically over the Sino Soviet Border. Major 25X1A [REDACTED] mentioned that NRO needed further guidance with respect to whether the beacon could be operated over the Sino Soviet Area on the next mission and this could not wait longer than 30 days. [REDACTED] mentioned 25X1A that preliminary checks on the accuracy of the mission by ACIC using the reduced ephemeris from DAHLGREN was 150' latitude, 200' longitude and 77 meters elevation as a maximum for 7 points checked in the [REDACTED] 25X1D test range area. He further mentioned that the coverage by the DISIC camera was quite successful in that at first count for the 1st half of the mission; 493 Category I targets and 1543 Category II targets were covered. Results from the second half were not available. [REDACTED] 25X1A mentioned that ACIC was using criteria for cloud free coverage based on a WAC cell area at the target. It was mentioned that it would be able to transfer imagery from mission 1109 to cloud free area on previous missions and locate additional targets. [REDACTED] mentioned that this would 25X1A be done but that the first count on coverage was for the target area itself.

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b. A draft memo to the Chairman, COMIREX as prepared by DIAMC was circulated for a starting point with respect to operating the Doppler Beacon over the Sino Soviet Area. Numerous comments were offered by representatives to clarify or add significant comments. [REDACTED] mentioned that we should consider that turning off the Doppler Beacon over the Sino Soviet Border would perhaps raise more questions than leaving it on continuously. [REDACTED] suggested that we might point out it could be an undesirable precedent to withhold operation of the beacon over the Sino Soviet Area. After extensive discussion it was concluded that [REDACTED] would make revisions in the draft paper in line with the discussion. Revised paper was distributed to MC&G Working Group on 31 March 1970. [REDACTED] expressed that he would contact the Chairman, COMIREX, concerning the matter and it may be handled direct with the COMIREX Staff or the paper may be distributed at the 2 April COMIREX meeting. From the standpoint of all concerned it was concluded that extensive planning had gone into placing the stations and getting ready to operate the entire system and it was very important to the MC&G community to be able to continue as planned. If there were further problems in connection with the operation of the beacon over the Sino Soviet Area the MC&G Working Group would like to respond to these problems with a view toward operating the beacon to obtain optimum results for positioning purposes.

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